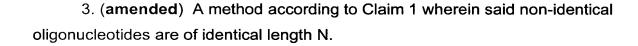
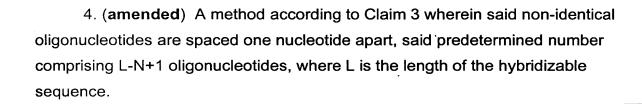


- (b) determining and evaluating for each of said oligonucleotides at least one parameter that is predictive of the ability of each of said oligonucleotides to hybridize to said target nucleotide sequence,
- (c) selecting a subset of oligonucleotides within said predetermined number of non-identical oligonucleotides based on an examination of said parameter,
- (d) identifying oligonucleotides in said subset that are in clusters along a region of said nucleotide sequence that is hybridizable to said target nucleotide sequence and
 - (e) selecting, for a cluster, a hybridization oligonucleotide.





- 10. (amended) A method according to Claim 1 wherein said parameter is derived from a factor by mathematical transformation of said factor wherein said factor is predictive of the ability of an oligonucleotide to hybridize with a target nucleotide sequence.
- 24. (amended) A method according to Claim 1 wherein step (c) comprises identifying a subset of oligonucleotides within said predetermined number of nonidentical oligonucleotides by establishing cut-off values for said parameter.
- 25. (amended) A method according to Claim 1 wherein said step (c) comprises identifying a subset of oligonucleotides within said predetermined number of non-identical oligonucleotides by converting the values of said parameter into a dimensionless number.
- 38. (amended) A method according to Claim 1 which comprises (i) identifying a subset of oligonucleotides within said predetermined number of non-identical





oligonucleotides by establishing cut-off values for each of said parameters.

26

- 98. (twice amended) A computer based method for selecting a hybridization oligonucleotide to hybridize to a target nucleotide sequence, said method comprising:
- (a) identifying under computer control a predetermined number of non-identical oligonucleotides within a nucleotide sequence that is hybridizable with said target nucleotide sequence, said oligonucleotides being chosen to sample a length of said nucleotide sequence,
- (b) under computer control, determining and evaluating for each of said oligonucleotides a value for at least one parameter that is predictive of the ability of each of said oligonucleotides to hybridize to said target nucleotide sequence and storing said parameter values,
- (c) selecting under computer control, from said stored parameter values, a subset of oligonucleotides within said predetermined number of non-identical oligonucleotides based on an examination of said parameter,
- (d) identifying under computer control oligonucleotides in said subset that are in clusters along a region of said nucleotide sequence that is hybridizable to said target nucleotide sequence and
- (e) under computer control selecting, for a cluster, a hybridization oligonucleotide.

BI

- 100. (twice amended) A computer system for conducting a method for selecting a hybridization oligonucleotide to hybridize to a target nucleotide sequence, said method comprising:
- (a) input means for introducing a target nucleotide sequence into said computer system,
- (b) means for determining a number of non-identical oligonucleotides that are within a nucleotide sequence that is hybridizable with said target nucleotide sequence, said oligonucleotide sequences being chosen to sample a length of said nucleotide sequence,
 - (c) memory means for storing said oligonucleotide sequences,
- (d) means or controlling said computer system to carry out a determination and evaluation for each of said oligonucleotide sequences a value for at least one